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ABSTRACT

The general purpose of the occupational analysis is to provide workable, basic information dealing with the many and varied duties performed in the commercial artist occupation. The document opens with a brief introduction followed by a job description. The bulk of the document is presented in table form. Seventeen duties are broken down into a number of tasks and for each task a two-page table is presented, showing on the first page: tools, equipment, materials, objects acted upon; performance knowledge (related also to decisions, cues and errors); safety--hazard; and on the second page: science; math--number systems; and communications (performance modes, examples, and skills skills and concepts). The duties include: perform business procedures; draw cartoons; make layouts and illustrations; render in continuous tone; prepare lettering and mechanical drawings; take, develop, print, and enlarge photographs; prepare visual projectuals, isometric and exploded views, sectional isometric views, perspective drawings, schematics, charts, and diagrams; and fit and mark copy. Appended are a list of tools and equipment needed, and a list of safety factors. (BP)

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Occupational Analysis

CE004170

COMMERCIAL ARTIST

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AN ANALYSIS OF THE COMMERCIAL ART OCCUPATION

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FOREWORD

The occupational analysis project was conducted by The Instructional Materials Laboratory, Trade and Industrial Education, The Ohio State University in conjunction with the State Department of Education, Division of Vocational Education pursuant to a grant from the U.S. Office of Education.

The Occupational Analysis project was proposed and conducted to train vocational educators, in the techniques of making a comprehensive occupational analysis. Instructors were selected from Agriculture, Business, Distributive, Home Economics, and Trade and Industrial Education to gain experience in developing analysis documents for sixty-one different occupations. Representatives from Business, Industry, Medicine, and Education were involved with the vocational instructors in conducting the analysis process.

The project was conducted in three phases. Phase one involved the planning and development of the project strategies. The analysis process was based on sound principles of learning and behavior. Phase two was the identification, selection and orientation of all participants. The training and workshop sessions constituted the third phase. Two-week workshops were held during which teams of vocational instructors conducted an analysis of the occupations in which they had employment experience. The instructors were assisted by both occupational consultants and subject matter specialists.

The project resulted in producing one hundred two trained vocational instructors capable of conducting and assisting in a comprehensive analysis of various occupations. Occupational analysis data were generated for sixty-one occupations. The analysis included a statement of the various tasks performed in each occupation. For each task the following items were identified: tools and equipment; procedural knowledge; safety knowledge; concepts and skills of mathematics, science and communication needed for successful performance in the occupation. The analysis data provided a basis for generating instructional materials, course outlines, student performance objectives, criterion measures, as well as identifying specific supporting skills and knowledge in the academic subject areas.

PREFACE

The basic strategy of the developers was to define the area of commercial art, delineate major duty areas and to organize and develop task statements as far as possible within the time frame limitations of the workshop. Prior to the workshop, a list of various tasks was rated for frequency of performance by a sampling of practicing commercial artists. In concept, these task statements, although not necessarily all inclusive, represent the initial step leading to a fully developed occupational analysis. The writers identified the skills and knowledge related to each task and organized the tasks into logical units of performance. In the utilization of this analysis, it will be desirable to continue the breakdown of the task list into minor and sub-task statements before proceeding to the development of the course outline.

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JOB DESCRIPTION

Commercial art is a cluster of inter-related and clearly identifiable duties. For practical reasons the breakdown of duties into tasks was rather broad in order to categorize the wide range of sub-tasks falling within the artist's duties. The commercial artist is involved in developing ideas into graphic forms using a variety of methods and media. The artist performs basic skills and techniques in compliance with the various principles of graphics and design to produce visual products to meet the needs of various clients.

TASK STATEMENT) PERFORM BUSINESS PROCEDURES

TASK STATEMENT) TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON	PERFORMANCE KNOWLEDGE		SAFETY - HAZARD	
	DECISIONS	CUES	ERRORS	
Typewriter Calculator Accounting books Forms, record Paper Pen & pencil Eraser	Billing documents Coding of ethics Comprehension of necessary: Accounting records Business sheets Time sheets Work orders Release forms What records are required and in what detail Determine allowance of time for statements to be paid Determine correct pay scale for specific detail performed	Availability of records Nature of records	Mathematical inaccuracies Incorrect addresses for billing Follow-up on invoicing	See Appendix
SCIENCE	MATH - NUMBER SYSTEMS		COMMUNICATIONS	
	Basic mathematics Accounting skills		Interpret content and value of specific records	

(TASK STATEMENT)

DRAW CARTOONS (FOR SINGLE OR MULTIPLE PRESENTATION IN ANY MEDIA)

TOOLS, EQUIPMENT, MATERIALS,
OBJECTS ACTED UPON

Basic tools
Basic equipment
Basic materials
Morgue or reference library

PERFORMANCE KNOWLEDGE

Analyze problem and choose situation
Fit gag or caption to situation
Make thumbnails or roughs
Make comprehensive
Prepare for reproduction

SAFETY - HAZARD

See appendix

DECISIONS

Determine drawing technique
Determine drawing media
Determine drawing specifications
Select appropriate thumbnails or rough

CUES

Instructions, policy, intended use
Instructions, intended use, availability
of media

ERRORS

To insure the concept of cartoon,
realistic, stylized or
caricaturization for determined

SCIENCE

MATH - NUMBER SYSTEMS

COMMUNICATIONS

Appropriate diction, denotative - connotative words,
clarity of expression, vocabulary, usage, spelling,
details and inference, logic, emotional appeals (propaganda
devices).
Recommendation report - oral
Classification
Reading comprehension
[These items have a usage from time to time, but seldom
are used in a single package]
[Principle of "Exaggerated Definition" may be a term to
be understood in the area of cartooning]
Transfer information between client and artist for use in
the creation of a piece of art

TOOLS, EQUIPMENT, MATERIALS,
OBJECTS ACTED UPON

Basic tools plus
Felt pens
Fixatif
Pencil, chisel lead
Basic equipment plus
Book, type specimen
Pastels
Projector, opaque
Visualizer (Lacey-Luci)
Basic materials plus
Paper, graphite
Paper, layout

PERFORMANCE KNOWLEDGE

Analyze layout (design) elements and requirements
Make a series of miniature (thumbnail) sketches of possible sizes and arrangements of elements
Prepare full sized layout to further test the suitability of the selected thumbnail
Develop layout from rough to comprehensive form
Evaluation of layout by artist, art director and client
Revise, if required

See appendix

SAFETY - HAZARD

DECISIONS

Selection of most suitable thumbnail
How comprehensive the layout is to be executed
What materials should be used

CUES

Intended use, instructions, aesthetics, taste
Intended use, cost & time considerations
Availability of materials, cost & time consideration

ERRORS

Ineffective layout
Poor comprehensibility
Mechanical errors

SCIENCE

Differences in absorption and radiation of energy between dark rough surfaces and light, smooth, polished surfaces
Color
Effect of illumination on color
Surface color
Mixing spectrum colors
Complementary colors, secondary & tertiary
Additive methods of color mixing
Subtractive methods of color mixing

MATH - NUMBER SYSTEMS

Determination of facts involving sectors of a circle
Determination of facts involving lines tangent to circles
Ratio and proportion
Geometric constructions
Development of graphs comparing two complimentary sets of figures

COMMUNICATIONS

Appropriate diction
Clarity of expression
Vocabulary
Usage
Spelling
Details and inference
Logic
Definition - written
Technical terminology
Transmission between client and artist for use in the production of a piece of art

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON

Basic tools plus
Brushes
Mail stick
Palette and palette knife
Basic equipment plus
Projector, opaque
Visualizer (Lacey-Luci)
Basic materials plus
Canvas
Charcoal
Paint, oil, acrylic and watercolor
Pastels
Plywood/Masonite

PERFORMANCE KNOWLEDGE

Analyze client's needs
Application of concepts, principles and rules of design and color
Comprehension or intended purpose
Analysis or procedures
Application of media

DECISIONS

Selection of media
Determination of size
Judgment in color selection and use

CUES

Instructions, aesthetics, taste, time and cost considerations, intended use

ERRORS

Failure to meet client's needs, dead lines, or due dates
Ineffective illustration
Failure to check color key from printing house

SAFETY - HAZARD

Pigments & solvents - skin and lung irritants, clothing damage
See appendix

SCIENCE

Differences in absorption and radiation of energy between dark rough surfaces and light, smooth, polished surfaces
[light source & intensity]
Nature of light (reflection, refraction and dispersion)
Color
Effect of illumination on color
Surface color
Mixing spectrum colors
Complementary colors, secondary & tertiary
Additive methods of color mixing
Subtractive methods of color mixing
Illusion (optical)
Effects of color juxtaposition
Multi-color optical illusion
Illusion in shape and line
Illusion in texture
Principles of design
Elements of design

MATH - NUMBER SYSTEMS

Ratio and proportion

COMMUNICATIONS

Appropriate diction
Denotative, connotative words
Clarity of expression
Vocabulary
Usage
Spelling
Details and inference
Logic
Emotional appeals (propaganda devices)
Technical terminology
Transfer information between client and artist for use in the creation of a piece of art
Receive & interpret verbal & written instructions
Understand technical vocabulary

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON	PERFORMANCE KNOWLEDGE	SAFETY - HAZARD	
Basic tools plus Dispenser, spout, water Well, slant or cups, nesting Basic equipment plus Airbrush Compressor or tank, air with valve assembly Press, dry mount Basic materials plus Acetate Color, opaque, grays, moist watercolor Color, transparent, liquid Paper, frisket Tissue, dry mount	Analyze task requirements Follow procedures for rendering Follow procedure for paint mixing <div> <div>DECISIONS</div> <div> Selection of media Selection of color harmonies Selection of best composition for most effective results </div> </div> <div> <div>CUES</div> <div> Availability Cost and time considerations Instructions Intended use </div> </div>	Compressor - excess pressure Electrical - shock, fire Air tank - sudden release of pressure (jet effect)	
SCIENCE	MATH - NUMBER SYSTEMS	COMMUNICATIONS	
Bernoulli's principle - air brush theory (operation) Principles of design - patterns of value Nature of light (spectrum, prism theory, geometric optics) Color Effect of illumination on color Surface color Mixing spectrum colors Complementary colors, secondary & tertiary Additive methods of color mixing Subtractive methods of color mixing	Ratio and proportion [ratio - value or color mixing]	Appropriate diction Denotative - connotative words Clarity of expression Vocabulary Usage Spelling Details and inference Logic Emotional appeals (propaganda devices) Technical terminology Transfer information between client and artist for use in the creation of a piece of art [interpretation of written and verbal instructions]	

TASK STATEMENT) PREPARE LETTERING

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON

Basic tools plus
Brushes, lettering
Pens, chisel
Pens, speedball
Pens, steel brush
Stick, mail
Basic equipment
Basic materials plus
Board, poster
Blanks, sign metal
Paints, lettering, permanent
Paints, lettering, tempera
Paper, parchment

PERFORMANCE KNOWLEDGE

Analyze requirements
Layout area (see layout)
Rough in lines and letters
Check spelling
Execute lettering
Evaluate for accuracy & completeness

See appendix

SAFETY - HAZARD

DECISIONS

Determine sequence and relative size
of elements
Select suitable tools (pen, brush, etc.)
Select letter style (s)
Select colors

CUES

Aesthetics, taste, instructions, legibility,
intended use, audience served

ERRORS

Misspelling
Inconsistency of letter style
Misapplication of design principles
Ineffective or incorrect size

SCIENCE

Principles of design
Principles of color harmony
Reaction of mixing color pigments to produce a third color

MATH - NUMBER SYSTEMS

Ratio and proportion
Measurement of length

COMMUNICATIONS

Transfer information between client and artist for use in
the creation of a piece of art

(TASK STATEMENT) PREPARE A MECHANICAL DRAWING

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON:	PERFORMANCE KNOWLEDGE	SAFETY - HAZARD
<p>Basic tools plus Compass, beam Compass, drop Divider, proportional Ellipse guides Punch, pin register Register, pin Shield, erasing Basic equipment plus Projector, opaque Visualizer (Lacey-Luci) Basic materials plus— Acetate Color, red transparent (Grumbacher Patent Red) Photostats/Velox/P.M.T. Pressure sensitive materials (screens, letters, symbols) Proofs, type Pumice, powdered Rubylith/Amberlith or equivalent</p>	<p>Choose up-to-date color screen guide for color percentages Interpret layout Locate position of elements Copy perimeter, crop marks, internal areas Paste up elements Choose methods of handling illustrations - same size, oversize Apply screens & textures Construct overlays Marginal instructions Cover tissue flaps</p> <p>DECISIONS Decide method of paste up Decide method of positioning illustrations Decide method of accomplishing color overlap Make correct decisions on color and color screens for percentages</p> <p>CUES Aesthetics, taste, instructions, ease of reproduction, application of procedure</p>	<p>See appendix</p> <p>ERRORS Inaccuracy of measurements Omission of elements Damage to elements Incorrect information to printer</p>
SCIENCE	MATH - NUMBER SYSTEMS	COMMUNICATIONS
<p>Color Effect of illumination on color Surface color Mixing spectrum colors Complementary colors, secondary & tertiary Additive methods of color mixing Subtractive methods of color mixing [color, illusion (optical)] Principles of design - for clarity we mean to include all areas of spatial arrangement Nature of light - concave and convex lens Determination of focal length Magnification Illusion Effects of color juxtaposition Multi-color optical illusion Illusion in shape and line Illusion in texture [variable sensitivity of films to reflected color]</p>	<p>Geometric constructions Ratio and proportion Measures of length</p> <p>7</p>	<p>Appropriate diction Denotative - connotative words Clarity of expression Vocabulary Usage Spelling Details and inference Logic Emotional appeals (propaganda devices) [Instruction Transfer] Proposal - written or oral Technical terminology Transfer information between client and artist for use in the creation of a piece of art [transfer oral, written] [Interpret graphic layout, understand technical vocabulary, evaluate visual quality of elements, write marginal notes for printer]</p>

TOOLS, EQUIPMENT, MATERIALS,
OBJECTS ACTED UPON

Camera
Film
Lights
Meter, exposure
Props

PERFORMANCE KNOWLEDGE

Comprehend intended purpose
Apply concepts, principles and rules of design and color
Arrange lights, props, etc.
Compute reflected light
Adjust camera
Load film
Expose film

SAFETY - HAZARD

See appendix

DECISIONS

Selection of camera type, props, etc.
Selection of film type
Judgment in application of design elements and principles

CUES

Cost & time, availability, instructions
Aesthetics, taste, instructions

ERRORS

Faulty decisions
Improper camera operation

SCIENCE

Differences in absorption and radiation of energy between dark rough surfaces and light, smooth, polished surfaces
Principles of design - for clarity, include all areas of spatial arrangement
Nature of light

Electromagnetic spectrum

Geometrical optics

straight line, reflection, refraction, dispersion

Concave & convex lens

determination of focal length, magnification

Camera & other optical instruments

speed of lens (light gathering power)

Color

effect of illumination on color, surface, color, mixing spectrum colors, complimentary colors, secondary & tertiary, additive methods of color mixing, subtractive methods of color mixing

Illusion (optical)

effects of color juxtaposition, multi-color optical illusion, illusion in shape and line, illusion in texture

MATH - NUMBER SYSTEMS

Basic arithmetic

COMMUNICATIONS

Logic
Technical terminology
Transfer information between client and artist for use in the creation of a piece of art

TASK STATEMENT) DEVELOP PHOTOGRAPHIC FILM	OBJECTS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON	PERFORMANCE KNOWLEDGE	SAFETY - HAZARD
<p>Chemicals Hangers Light, safe Scissors Sinks Tanks Timer Tongs Trays</p>	<p>Mix chemical solutions Load films in tanks or holders Develop steps and times Wash Dry</p>	<p>DECISIONS</p> <p>Selection of developer Selection of development times</p>	<p>ERRORS</p> <p>Chemicals - skin irritant, eye irritant, staining, clothing damage See appendix</p>
		<p>CUES</p> <p>Implies - application of procedure</p>	<p>ERRORS</p> <p>Contamination of solutions Wrong solutions Light contamination Failure to follow instructions</p>
<p>SCIENCE</p> <p>Chemistry of developing formulas Effect of light on photographic emulsions</p>	<p>MATH - NUMBER SYSTEMS</p> <p>Liquid and dry measures Measures of weight Measure of temperature</p>	<p>COMMUNICATIONS</p> <p>Read technical data sheets Understand technical vocabulary</p>	

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON	PERFORMANCE KNOWLEDGE	SAFETY - HAZARD	
<p>Box, paper storage Chemicals Dodging tools Enlarger Frame, printing Light, safe Paper, photographic Printer, contact Sink Timer Tongs Trays Dryer</p>	<p>Print or enlarge negative Expose paper Develop paper Dry paper</p>	<p>Chemicals - skin & eye irritant, staining, clothing damage See appendix</p>	<p>DECISIONS</p> <p>Method of producing print - contact or enlarge Selection of paper type Selection of developer Selection of drying method gloss or matt finish</p> <p>CUES</p> <p>Implied - application of procedure Intended use Cost and time Availability Instructions</p> <p>ERRORS</p> <p>Contamination of chemicals Contamination by light Improper ferrotyping</p>
SCIENCE	MATH - NUMBER SYSTEMS	COMMUNICATIONS	
<p>Chemistry of developing formulas Effect of light on photographic emulsions Principles of dodging Principles and effects of enlargement on texture</p>	<p>Measures of weight Liquid and dry measures Measure of temperature</p>	<p>Read technical data sheets Understand technical vocabulary</p>	

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON

Basic tools plus
Pens, felt tip
Basic equipment plus
Camera and accessories
Copier, Thermofax, etc.
Darkroom facilities
Projector, filmstrip
Projector, motion pictures
Projector, opaque
Projector, overhead
Projector, slide
Basic materials plus
Acetate
Film, orthochromatic
Film, panchromatic
Film, copier
Frame, overhead
Pressure sensitive materials (screen, letters,
etc)

PERFORMANCE KNOWLEDGE

Analyze task requirements
Layout of area (see layout)
Prepare hand made projectual or prepare mechanical art
Make projectual
Camera (see photography)
Thermo-fax, 3-m copier, etc.
Frame projectual

See appendix

SAFETY - HAZARD

DECISIONS

Select production method
hand (felt pen, grease pencil)
machine (camera, thermo-fax, 3-m)
Select appropriate tools for method of
production

CUES

Cost & time, ease of reproduction,
aesthetics, instructions
Implied - application of procedure

ERRORS

Spelling errors
Camera errors
Copying machine errors

SCIENCE

Principle of design - for clarity, include all areas
of spatial arrangement
Nature of light
Electromagnetic spectrum
Geometrical optics
straight line, reflection, refraction, dispersion
Concave & convex lens
determination of focal length, magnification
Camera & other optical instruments
speed of lens (light gathering power)
Color
Effect of illumination on color
Surface color
Mixing spectrum colors
Complementary colors, secondary, & tertiary
Additive methods of color mixing, subtractive methods of
color mixing
Illusion (optical)
Effects of color juxtaposition, multi-color optical illusion,
illusion in shape and line, illusion in texture

MATH - NUMBER SYSTEMS

Basic arithmetic
Ratio and proportion
Geometric constructions (dimensional)
Reading and interpret charts, tables and/or graphs
Giving a coding system, recognize and identify each unit
involved by assigning necessary symbols, numerical or
literal

COMMUNICATIONS

Appropriate diction, denotative - connotative words, clarity
of expression, vocabulary, usage, spelling, details and
inference, logic, emotional appeals (propaganda devices)
Recommendation report - oral and written
Process report or instruction - oral and written
Physical experimentation report - oral and written
Proposal - oral and written
Progress report - oral and written
Description of mechanism - oral and written
Definition - oral and written
Classification
Technical terminology
Transfer information between client and artist for use in the
creation of a piece of art

TASK STATEMENT

PREPARE AN ISOMETRIC VIEW OF AN OBJECT AND/OR EXPLODED VIEW

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON

Basic tools plus
Pen, technical
Templates, ellipse
Basic equipment plus
Machine, drafting
Projector, opaque
Register, pin
Visualizer (Lacey-Luci)
Basic materials plus
Acetate
Color, red, transparent (Grumbacher Patent Red)
Photostats/Velox/PMY
Pressure sensitive materials (numbers, arrows, etc)
Proofs, type
Punch, pin register
Rubylith/Amberlith, etc

PERFORMANCE KNOWLEDGE

Read and interpret (in sketches) the blue prints
Disassemble device (noting sequence of breakdown)
Layout and draw lines of axis, centerlines etc. & make rough drawing
Trace to board and finish drawing in desired media
Balloon and letter (by hand or mech.) where it is needed
Prepare for reproduction

See appendix

SAFETY - HAZARD

DECISIONS

Determine format

CUES

Instructions, aesthetics
Cost and time
Ease of reproduction

ERRORS

Poor end product

SCIENCE

Principles of design - for clarity, include all areas of spatial arrangement (mechanical principles - some ability)

MATH - NUMBER SYSTEMS

Measures of length
Ratio and proportion
Geometric constructions
Given a coding system, recognize and identify each unit involved by assigning necessary symbols, numerical or literal

COMMUNICATIONS

Logic
Description of mechanism - oral
Technical terminology
Reading comprehension
Transfer information between client and artist for use in the creation of a piece of art
[Receive and interpret written and verbal instructions]

**TOOLS, EQUIPMENT, MATERIALS,
OBJECTS ACTED UPON**

Basic tools plus
- Pen, technical
Templates, ellipse
Basic equipment plus
Machine, drafting
Projector, opaque
Register, pin
Visualizer (Lacey-Luci)
Basic materials plus
Acetate
Color, red, transparent (Grumbacher Patent Red)
Photostat/Velox/PMT
Pressure sensitive materials (numbers, arrows, etc)
Proofs, type
Punch, pin register
Rubylith/Amberlith, etc.

PERFORMANCE KNOWLEDGE

Interpret blue prints
Disassemble unit
Draw rough sketches and note any part to be accentuated
Redraw from tracing or light line to board
Balloon, call-out and/or identify all necessary components
Letter (hand or mechanical)
Prepare for reproduction

SAFETY - HAZARD

See appendix

DECISIONS

Determine perspective point of view
Determine media to be used
Determine size and format

CUES

Aesthetics
Taste
Instructions
Cost and time
Ease of reproduction

ERRORS

Poor end product

SCIENCE

Principles of perspective
Principles of design - for clarity, include all areas
of spatial arrangement
Nature of light [effect of light on elements (values)]
Color
Effect of illumination on color
Surface color
Mixing spectrum colors
Complementary colors, secondary & tertiary
Additive methods of color mixing
Subtractive methods of color mixing
Illusion (optical)
Effects of color juxtaposition
Multi-color optical illusion
Illusion in shape and line
Illusion in texture
Principles of mechanics

MATH - NUMBER SYSTEMS

Basic arithmetic
Measures of length
Ratio and proportion
Locate by approximation rational numbers and integers on
the number line (sequential ordering) call outs to parts
lists

COMMUNICATIONS

Logic
Transfer information between client and artist for use in
the creation of a piece of art

TOOLS, EQUIPMENT, MATERIALS,
OBJECTS ACTED UPON

Basic tools plus
Pen, technical
Basic equipment plus
Visualizer (Lacey-Lucci)
Basic materials

PERFORMANCE KNOWLEDGE

Analyze blue prints
Set up necessary elements of mechanical perspective problem
Draw perspective in pencil on layout or tracing paper
Trace and finish comprehensive layout
Drawing in media required
Prepare work for reproduction or mounting

SAFETY - HAZARD

See appendix

DECISIONS

Determine perspective point of view
Determine color scheme
Determine composition
Determine media to be used

CUES

Taste, aesthetics, instructions
Aesthetics, taste, intended use, cost of reproduction and ease
Cost and time, ease of reproduction, instructions, intended use

ERRORS

Poor end result

SCIENCE

Differences in absorption and radiation of energy between dark rough surfaces and light, smooth, polished surfaces [in color (prismatic)]
Principles of perspective
Principles of design - for clarity include all areas of spatial arrangement
Nature of light.
Electromagnetic spectrum, geometrical optics (straight line, reflection, refraction, dispersion), concave and convex lens (determination of focal length, magnification), camera & and other optical instruments

Color

Effect of illumination on color, surface color, mixing spectrum colors, complementary colors (secondary & tertiary), additive methods of color mixing, subtractive methods of color mixing
Illusion (optical)
Effects of color juxtaposition, multi-color optical illusion, illusion in shape and line, illusion in texture

MATH - NUMBER SYSTEMS

Basic arithmetic
Measures of length

COMMUNICATIONS

Logic
Technical Terminology
Transfer information between artist and client

TASK STATEMENT) PREPARE A SCHEMATIC/AND CHARTS & DIAGRAMS

TOOLS, EQUIPMENT, MATERIALS,
OBJECTS ACTED UPON

Basic tools plus
 Templates, symbol
 Sweeps and ellipse guides
 Basic equipment plus
 Machine, drafting
 Projector, opaque
 Register, pin
 Visualizer (Lacey—Luci)
 Basic materials plus
 Pressure sensitive materials (colors, screens, shading sheets,
 symbols

PERFORMANCE KNOWLEDGE

Analyze prints, sketches and written information to be used
 Set up lines and/or diagram or graph design to be used in
 rough
 Select symbols and signs and rough in
 Trace drawing on board
 Do mechanical or hand lettering
 Prepare for reproduction

DECISIONS

Determine board composition
 Determine letter style
 Determine size for reduction

CUES

Aesthetics, taste, instructions, audience,
 intended use

ERRORS

Spelling errors
 Misinterpreted signs or symbols
 Details (Tech) omission

SAFETY — HAZARD

See appendix

SCIENCE

Principles of design - for clarity include all areas of spatial
 arrangement

MATH — NUMBER SYSTEMS

Basic arithmetic
 Basic math
 Measures of length
 Measures of weight
 Measures of temperature
 Liquid and dry measures
 Ratio and proportion
 Development of graphs comparing two complimentary sets
 of figures
 Given a coding system, recognize and identify each unit
 involved by assigning necessary symbols, numerical or
 literal

COMMUNICATIONS

Appropriate diction, denotative-connotative words, clarity
 of expression, vocabulary, usage, spelling, details and
 inference, logic, emotional appeals (propaganda devices)
 Technical terminology
 Transfer information between client and artist for use in the
 creation of a piece of art

TOOLS, EQUIPMENT, MATERIALS, OBJECTS ACTED UPON

Basic tools plus

Book, type specimen

Copy, typewritten

Gauge, line

Rule, pica

Scale, proportional (slide rule)

PERFORMANCE KNOWLEDGE

Analyze copy preparation for completeness

Measure copy area as shown on layout

Make line by line character count

Select type style, size and leading

Determine characters per pica

Determine if the type will fit the space allotment

Recalculate, if necessary

Recheck, if necessary for accuracy

See appendix

SAFETY - HAZARD

DECISIONS

Choose type of composition method

Choose typographic supplier

Decide suitability of type style, size and

leading

Decide to repeat operations, if required

CUES

Aesthetics, time and cost, intended use

Past performance of supplier, supplier's

reputation in the industry

ERRORS

Mathematical errors

Misreading charts

Failure to recheck calculations

Failure of copy to fit required area

SCIENCE

Principles of design, for clarity, include all areas of spatial

arrangement

Copy block value

MATH - NUMBER SYSTEMS

Basic arithmetic

Ratio and proportion

Read and interpret tables, charts, and/or graphs

Given a coding system, recognize and identify each unit

involved by assigning necessary symbols, numerical or literal

COMMUNICATIONS

Appropriate diction, denotation/connotation, clarity of expression

vocabulary, usage, spelling, details and inference, logic,

emotional appeals (propaganda devices)

Recommendation report—oral and written

Physical experimentation report—oral and written

Progress report—oral and written

Definition—oral and written

Classification

Technical terminology

Reading comprehension

Reading speed

Transfer information between client and artist for use in the

creation of a piece of art

TOOLS, EQUIPMENT, MATERIALS,
OBJECTS ACTED UPON

Basic tools
Book, type specimen
Copy, typewritten
Pencils, colored
Acetate grease pencil or china marker

PERFORMANCE KNOWLEDGE

Type composition methods
Marking procedures in general and for specific supplier

DECISIONS

Choose typographic supplier
Choose type composition method
Choose up-to-date typography books for latest fonts in cold or hot type

CUES

Past performance of supplier's reputation in industry, cost and time consideration

ERRORS

Incomplete marking
Illegibility of marking
Failure to follow procedure

SAFETY - HAZARD

See appendix

SCIENCE

MATH - NUMBER SYSTEMS

Read and interpret charts, tables and/or graphs
Given a coding system, recognize and identify each unit involved by assigning necessary symbols, numerical or literal

COMMUNICATIONS

Appropriate diction, denotative - connotative words, clarity of expression, vocabulary, usage, spelling, details and inference, logic, emotional appeals (propaganda devices)
Recommendation report - oral and written
Process report or instruction - oral and written
Physical experimentation report - oral and written
Proposal - oral and written
Progress report - oral and written
Description of mechanism - oral and written
Definition - oral and written
Classification
Technical terminology
Reading comprehension
Reading speed
Transfer information between client and artist for use in the creation of a piece of art

TOOLS AND EQUIPMENT

NOTE: The basic material, equipment and tool lists are meant to include all things that we consider most basic to all or most tasks.

Tools, equipment and materials

- Tools — less than \$50.00 value
- Equipment — more than \$50.00 value
- Materials — expendable supplies

Basic items (considered to be commonly available and may not be specifically itemized.)

Tools —

- Brushes, pointed
- Holder, pen
- Pens
- Instrument, drafting set, including ruling pen
- Triangle, 30-60-90
- Triangle, 45-45-90
- Knife, X-Acto, mat
- French curve
- Scale, fraction
- Scale, decimal (engineer, triangular)
- Scissors
- Sharpening stone
- T-square, straight edge
- Pencil pointer
- Can, rubber cement with brush and thinner
- Water jars

Equipment —

- Table, drawing
- Taboret
- Light, desk (optional)
- Drafting (arm) machine
- Cutter, paper
- Table, light
- Illumination, adequate room
- Filing cabinet

Materials —

- Ink, black india
- Paper, bond, newspaper
- Paper, graphite
- Paper, tracing
- Pencils, graphite drafting, carbon
- Eraser, pearl, kneadable, soap
- Acetate, clear and colored
- Sand paper
- Tape, scotch masking
- Tape, scotch magic
- White opaque watercolor
- Board, illustration
- Board, bristol
- Board, Ross
- Fixatif
- Pastels

APPENDIX

Safety

Fluids

1. Eye or skin irritants
2. Toxic
 - a. internal as fluid - or skin penetrative
 - b. external as gas or vapor

Pointed or sharp instruments

Paper cutter

Pens, compass, knives, etc.

Electrical or heated

Shock or burn

Explosive when introduced to gas or vapor

Fire

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